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TECHNICAL REPORT:

Training Family Medicine Practitioners at the Family Medicine Training Center in Issyk-Kul Oblast

Authors

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May 2000

Karakol, Issyk-Kul Oblast, Kyrgyzstan



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I. Abstract

ZdravReform helped to establish a Family Medicine Training Center in Karakol City, incorporating a model family group practice (FGP). The first trainees through the system were eight trainers who subsequently went on to train 215 oblast physicians. This report looks at the experience of training family medicine doctors and trainers at the center, highlights the methods used to introduce family medicine, and illustrates the challenges met with during implementation.

After the first stages of the course, implementation results were unpromising. Newly trained family medicine doctors tended to stick to their specialties. This led the organizers to set up outreach-training courses, which gave additional help on the ground. A further initiative was to reorganize physicians within the FGPs so that each family came under the jurisdiction of one doctor, thereby increasing the doctor's personal responsibility and incentives to look after his patients' health. After these various refinements, the number of referrals from the new family centered primary care practices decreased dramatically and the newly trained doctors took on patients regardless of the patient's sex, age or type of complaint.

II. Executive Summary

Since 1996, Issyk-Kul Oblast has been one of Kyrgyzstan's key health reform demonstration sites, with an emphasis on primary care as the main vehicle of reform. ZdravReform has been working with the authorities there to facilitate a program of training doctors and trainers in family medicine in order to reinforce family group practices (FGPs) throughout the oblast. This report looks at how this has been achieved and at problems encountered in the process.

Training of personnel was seen as one of the most important pre-conditions for reform of the primary care sector. The understanding and knowledge of such doctors and their willing participation in the reform process is essential to the success or failure of reforms.

The first step taken was the establishment of a Family Medicine Training Center (FMTC) in Karakol City, which incorporated a model training FGP created from the combination of two former FGPs. The Director of the FMTC, with ZdravReform's help, developed a training program allowing doctors to combine theory with practice in the model FGP. This practical training was carried out as joint consultations, with several students assigned to particular specialists, trainers, or ZdravReform consultants. It took up over 70 percent of the program and provided an invaluable part of the training. Students were encouraged to work together to diagnose complaints interactively and to try to cure them.

Vertical programs on issues such as ARI, CDD and family planning were also integrated into the teaching in order to strengthen knowledge. The training program was divided into six stages with four parts to each stage combining lectures, seminars and practical training. In addition to the training course ZdravReform provided the new doctors with books and other literature. There was some concern, however, that none of this literature covered family medicine in its entirety.

The first students to pass through the course were eight doctors who subsequently became family medicine trainers. In a comparative analysis carried out which monitored the performance of the eight trainee doctors from the model FGP with those from a similar FGP in Karakol, it was noted that physicians from the model FGP provided services regardless of sex, age or type of complaint, in spite of their specialty, while those from the other FGP stuck to their former specialties (prior to transition to family medicine, FGPs had initially been set up with one pediatrician; one therapist and one obstetrics-gynecologist). In addition, the model FGP referred its patients to specialist less and the cost of health services in this FGP was half as much as in the comparative FGP.

In turn the trainers trained 215 oblast physicians in family medicine. In the oblast as a whole family medicine was implemented along the lines of the model FGP at the FMTC in Karakol. The enrolled population was divided up according to the principle 'one family – one doctor' which increased the personal responsibility of the newly trained physicians and provided them with new incentives.

After the first stage of clinical training it was seen that only two of the 74 FGPs in the oblast were implementing 'family medicine' in practice. This led the FMTC to develop outreach training in order to coordinate the clinical training with practical work. During this on-site consultation with the new doctors, trainers also worked on related non-medical problems. The outreach training was crucial to optimizing the training process. A year after the first outreach course took place, it was shown that all FGPs in Ton Rayon and Balykchi City used the family medicine principle and the number of referrals to hospitals had substantially decreased. However, it was also noted that low pay to physicians remained a barrier to full implementation of the new model.

III. Introduction

In 1996, Issyk-Kul Oblast was selected as a health care reform demonstration site, by decision of the Government of the Republic of Kyrgyzstan. Based on the results of this demonstration site, certain changes are to be made to the Health Insurance Law (RK Government Decree 93, March 20, 1996). The primary health care (PHC) sector plays a key role in health care reform in Kyrgyzstan, with the ultimate outcome of reform being to increase the quality of professional primary health care resources available to the population, at the lowest possible cost. ZdravReform has provided technical support and personnel training to the Issyk-Kul Oblast experiment, and has implemented a grants program there.

Given international experience, it was decided to reform the Issyk-Kul Oblast primary health care sector through the introduction of family group practice (FGP). In rural areas this was achieved by reorganizing rural physician and feldsher-midwife posts into FGPs. In cities and rayon centers, FGPs were opened within existing polyclinics, while five FGPs were created outside existing health facilities. The FGPs were registered as independent legal entities under the Ministry of Health with their own bank accounts and stamps. There are currently 74 FGPs in the oblast.

Reorganizing primary health care facilities into FGPs creates a base for implementing family practice. The next step is the creation of qualified family practitioners who are able to coordinate the health care delivery system, which, in turn, will help to save resources. The family practitioner is the first point of reference for patients and the qualifications of a family practitioner are decisive in resolving patient problems at the FGP level, or referring patients to focused specialists or inpatient care. Only highly professional family practitioners are able to ensure improvements in quality, and reductions in the cost of the health services.

The final effectiveness of health care reforms depends on the acceptance and support of the personnel implementing the reforms. They need to be convinced of the goals of the reform, prepared both professionally and psychologically for potential changes, and provided with financial incentives. The resolution of these issues is important since this will determine whether FGP physicians become true agents of health care reform in Kyrgyzstan as well as whether FGPs will become viable and truly independent primary health care structural sub-units.

Before reform, the majority of newly formed FGPs accommodated three specialists: a therapist; a pediatrician; and an obstetrician-gynecologist (ob-gyn). The aim of the training program initiated in Issyk-Kul Oblast was to change this, so that with time each FGP would house several family physicians.

IV. Training Family Medicine Trainers

A. Preliminary Short-term Family Practice Courses

In a test project in 1995, 23 physicians from Karakol City, and Dzhety-Oguz and Tup Rayons underwent a 198-hour introductory post-graduate course on family medicine, organized by the Oblast Health Department (OHD) and ZdravReform. By that time, seven FGPs had been formed in the city of Karakol (the oblast center). The training course started with an introductory course on family medicine given by two US family practitioners. Practical studies on the use of medical equipment were conducted and instructions on cross-training between different specialties were given to the physicians. Oblast specialists subsequently conducted two-week mini-courses on the following specialties: dermatology, surgery, endocrinology, ENT, ophthalmology, therapy, cardiology, pediatrics, and obstetrics-gynecology. The curriculum was approved by the Republican Center for Continuous Training of Physicians and Pharmaceutical Specialists (RCCTP&PS), and on completion of the courses, the trainee physicians were awarded certificates. In addition, the FGP physicians in the oblast attended one to two day training seminars on family planning, rehabilitation, alcoholism, and drug addiction.

Subsequent monitoring and evaluation of FGP physicians highlighted an unsatisfactory level of knowledge. It appeared that the training courses did not have a positive influence on either the character or quality of work of FGP physicians. The physicians continued to work according to their basic specialty and there was no transition to a family oriented code of medicine.

Based on the experience of conducting this training course, the American family practitioners defined two key directions for further activities, in order to resolve the issues of FGP staff training:

1. Training of specialist family practice trainers who would train physicians in future; and
2. Provision of medical literature to FGP physicians, as a basis for continuous professional self-education.

The need for training, and in particular of family practice trainers, was determined by the following factors:

- Family practice is a new subject within the Kyrgyz healthcare system. Professors and staff of the Medical Academy and RCCTP&PS are all inpatient specialists, many of who have never worked in PHC settings.
- The bulk of teaching experience is working with an undergraduate audience, who are trained on the fundamentals of clinical subjects using case studies with already defined diagnoses. A PHC physician necessarily works differently; he/she sees patients with unidentified diagnoses. Traditionally undergraduate and postgraduate curricula focus on theory while practical classes are not given due attention.
- Evidence of the thinking patterns of physicians in defining a working diagnosis and hypothesis, showed that in both hospitals and undergraduate training on clinical subjects, a clinical mode of thinking is predominant. However, among practicing physicians within primary health care, deductive and heuristic methods prevail.
- Training courses for training PHC physicians are traditionally provided on separate specialty subjects at republican teaching hospitals and scientific research institutes located in the city of Bishkek, and the oblast hospital in the city of Osh. The curriculum does not take the specifics and character of the work of PHC physicians into account, particularly in rural areas. So, a pediatrician or therapist covering between two and five thousand patients will have undergone a postgraduate training course on pediatrics / therapy, although the population needs a family practitioner. In reality these physicians work as family practitioners, without proper training or the right to practice, simply because they have the required specialty qualifications.

B. Family Training Center

In 1996, as part of the ZdravReform program, American family practitioners from the Institute of Scientific Technologies and Language, USA, organized a Family Medicine Training Center (FMTC) in the city of Karakol, Issyk-Kul Oblast. The Training Center incorporated a training model FGP, amalgamated from two former FGPs. In September, the Karakol FMTC was renamed the Karakol Branch of the Bishkek Department for Training Family Practitioners. The latter in its turn is a structural sub-unit of the RCCTP&PS. The main goal of changing the status of the Training Center was to coordinate activities and to achieve specific republican standards in training FGP personnel.

The Karakol FMTC fulfills two important functions:

- 1) It trains family practice trainers and carries out retraining of FGP physicians in Issyk-Kul Oblast; and
1. It provides practical and methodological assistance to FGPs in their transition to the principle of family medicine in the provision of health care.

The training center refines new forms of health care delivery; the relationship between FGPs and other health care facilities; adaptation of international experience to local conditions; and development of methodological recommendations for implementation in all FGPs in the oblast.

The establishment of a center for retraining primary health care physicians, and training trainers chosen from among practicing doctors, was the first of its kind in the CIS. Conditions within the FMTC and specifically the training model FGP, mirror the actual work conditions found in FGPs. When the FMTC was created, a broad educational campaign was carried out simultaneously in order to explain the objectives of the training center to the local population. These activities resulted in the enrollment of well-informed patients who supported the objectives of the FMTC.

In order to combine clinical training with provision of services to the enrolled population, the working day at the FMTC was arranged as follows: from 8 - 9.30 a.m. the physicians attended family practice lectures; from 9.30-12.30 they consulted with patients; and from 13.30-15.30 there was a discussion of the working day and special topic seminars. This integrated approach to the training process, which included a focus on clinical practice was seen as an improvement on traditional training methods.

C. Transition to the Family Medicine Principle

The FMTC took eight catchment area physicians and trained them in family medicine using the initial and advanced courses described below. These doctors were subsequently trained to train other doctors in family medicine.

1. Development of the Training Course

From September 1996 to May 1997 Dr. Idar Rommen, an American family practitioner, headed the FMTC. Dr. Rommen adopted an individual plan for the training of family practitioners, with special emphasis on practical clinical training. As part of this plan he provided consultative assistance to trainee physicians, added a practice of jointly seeing pregnant women and children in the FGP office, and taught practical skills about how to use new medical equipment. Dr. Rommen also noted that home visits took up too much time, so he hired a special physician to cover these (who also attended the lectures and practical classes). One of the reasons why home visits were cancelled was that American family practitioners are not obliged to make home visits or monitor newborns at home. Dr Rommen's training course also required that the trainee physicians participated in conferences and seminars provided by ZdravReform consultants. They made reports at family physician conferences in Karakol, and gained experience in delivering lectures.

Since the FMTC was located in an FGP in the city, the majority of patients still wanted to see specific specialists. The trainees needed practical skills in providing care to patients needing ophthalmology, endocrinology, ENT, surgery and other specialties. However, because of low financial incentives and insufficient understanding of family medicine, the polyclinic specialists were unable to assist the FGP trainee physicians. An attempt was made to involve the specialists in the training process but it was unsuccessful.

In June 1997, Nazarly Usabaliev, Candidate of Medical Sciences, was appointed Director of the FMTC. Dr. Usabaliev carried out a comparative analysis between the family practitioner training plan developed by Dr. Rommen and the National Family Practitioner Training Program. The latter program was developed by consultant family practitioners from America and RCCTP&PS specialists. The analysis showed that complete fulfillment of the National Program required Dr. Rommen's plan to be augmented by another 640 training hours. Dr. Usabaliev therefore developed an additional advanced training program complimentary to the initial training program designed by Dr. Rommen. The advanced training plan consisted of 107 hours of lectures, 133 hours of practical studies and 400 hours of practice.

Lectures

The lecture course was compiled by US family practitioners, the Scientific Technologies and Languages Institute, RCCTP&PS specialists, the Kyrgyz Medical Academy and ZdravReform consultants. Topics included adolescent psychology, dermatology, family planning, laser diagnostics, oncology, orthopedics, physiotherapy, psychiatry, surgery, urology, venerology, and a clinical course on ARI and CDD WHO/BASICS programs.

Table 1: Time devoted to lectures (in the advanced program)

List of Implementers	Section of the Training Program	Number of Hours
Tom Chu, US family practitioner	Dermatology, Venerology	20
David Frikke, US family practitioner	Surgery, Orthopedics, Oncology	18
Paul Fonken, US family practitioner	Adolescent Psychology, Psychiatry	20
Mennart Siimen, US family practitioner	Urology	7
A. Israilov, associate professor, & E. Karli, RCCTP&PS	Laser Diagnostics	16
T Simonenko, associate professor, RCCTP &PS	Physiotherapy	12
G Ashirakhmanova, ZdravReform specialist	Clinical Course on ARI and CDD WHO/BASICS Programs	6
M Musuraliev, Professor, Kyrgyz State Medical Academy	Family Planning Clinical Course	8
	<i>Total</i>	<i>107</i>

Practical Training

Practical studies were conducted at the FMTC and at oblast hospitals. Clinical case studies proved to be the most valuable resource for trainees in terms of gaining practical experience. Patients were selected from those who came to the FGP office for care, and during home visits. Trainee physicians made home visits in response to patient calls or in order to visit newborns. During this practical program, depending on the patient's health problem, a specific trainee physician from the FMTC fulfilled the role of consultant-trainer. At the end of the practical studies, the cross-training skills of the consultant-trainer were discussed under supervision of the medical director. In this way, the future trainers' teaching skills were developed.

Table 2: Time devoted to seminar and practical studies (in the advanced program)

Training program section	Number of hours
Therapy, cardiology	65
Ob-gyn	4
ARI and CDD, WHO/BASICS program	4
Pediatrics	20
Immuno-prophylaxis	4
Child neurology	4
Surgery	4
Testing trainees	28
<i>Total</i>	<i>133</i>

Development of practical skills

This section of the training program included joint assessment of patients by trainees in the office and at home (cross-training), as well as with the medical director and specialists from the city polyclinic. Involvement of the latter in the training process was possible due to support from ZdravReform. Each trainee worked with polyclinic specialists for two days a month. As well as gaining necessary practical experience on a number of clinical subjects, future family practitioners also became aware of specific

responsibilities and the importance of continuity of health care. The understanding of the goals and objectives of family practice and health care reform in general by polyclinic and oblast specialists was also accomplished.

Although Dr. Rommen had cancelled the trainees' home visits, a review of this decision showed that it did not appropriately reflect local peculiarities. Home visits are actually included in the job description of the FGP physician. In order to comply with legal regulations, 30 percent of a physician's working time should be devoted to home visits including calls, examination of newborns (under one month) and his/her mother, and visits to seriously ill patients. Taking into account the necessity of seeing newborns and seriously ill patients at home, and the mentality and educational level of the local population, a decision was made to restore the home visits of the trainees.

2. Training Course

Given that the transition experience of the family medicine trainers to the family-based principle of health provision is the basis of implementing family practice in Issyk-Kul Oblast, a detailed description of activities carried out in pursuit of this goal follows.

At the initial stage of FGP development, a free enrollment campaign for the population was carried out in which the population exercised their right to free choice of primary health care provider. As a result, each family was enrolled in an FGP. In those FGPs with three specialists, the adult population was registered with a therapist; children were registered with a pediatrician; and women of fertile age were registered with an ob-gyn. Within such an organization, a major indicator of a true family group practice is the ability to interchange physicians. In polyclinics, physicians would stand in for each other during colleagues' holidays or in emergencies, but there was no flexibility beyond this. Such a system did not promote the practice of family medicine.

Analysis of the practical work of the family medicine trainers after a year of training showed that on the whole they continued to work within their basic specialty. Only three out of the eight trainee trainers made attempts to see patients outside the scope of their specialization. The results of the practical work for the trainee trainers in April 1997 are presented below.

Table 3: Practice statistics for trainee trainers in the model FGP for April 1997

Specialists	Therapeutic patients %	Pediatric patients incl. preventive visits %	Gynecological patients/ pregnancies %	Other (ETN, neurological patients) %
Therapists	69.7	3.6	6.1	20.6
Pediatricians	1.0	92.5	0	6.5
Obstetric-gynecologists	4.9	2.0	85.8	7.3

As shown in table 2, the physicians, especially pediatricians, continued to work in their specialty. Therapists, however, carried out a comparatively wide range of activities which included attending to non-profile neurological, dermatological and ETN patients. They also provided their services to gynecological patients and pregnant women, although the proportion of these activities within their total work volume during the month was not high (6.1%). It was noticed that physicians with comparatively low qualifications (two of the eight) continued to work within their specialty and did not try to expand the volume of services provided by seeing patients regardless of sex, age or type of complaint.

In the first year of the program, the practical component of the clinical training turned out to be unsatisfactory. Trainees, in spite of successful theoretical performance, continued to work within their specialty. This state of affairs did not meet the requirements of the FMTC, and as a result, the family medicine staff-training program came under question.

It was consequently decided that the 10,180 patients enrolled in the model FGP should be divided between doctors based on the principle 'one family - one doctor'. It was felt that this system would engage doctors and give them an added personal incentive for practicing according to the principles of family medicine. As a result, starting on October 16, 1997, each trainee physician began to serve 1,035-1,400 people or 272-390 families regardless of sex, age or type of complaint. It was felt that this decision was viable, based on the following foundations:

- Trainee physicians had been trained at the FMTC for over one year including two-week courses on different specialties;
- Each trainee had long-standing experience of activities;
- Team work and colleague interaction at the FGP increased confidence in the initial steps required to serve patients on a family principle;
- Each doctor understood the objectives and goals of the FMTC as well as the necessity of primary health sector reform in general; and
- ZdravReform were providing scholarships for trainee doctors, which allowed them to become full-time trainers.

Within the FGPs, the functions of the registration office were reorganized and a pre-examination room established. Report forms for the family doctor allowed daily practical activities to be monitored. The registration office referred patients directly to their family doctor regardless of sex, age and type of complaint. Anthropometrical data, blood pressure measurements, records of passport details and previous patient surveys were carried out by nurses in the pre-examination room.

The ability of patients to see several doctors concurrently, and to be jointly assessed, is one of the most important aspects of the transition to the new system of health delivery. Joint training under supervision proved extremely useful. Trainees jointly examined 303 patients, including children and pregnant women. Broken down, this worked out as 240 patients seen with the medical director; 11 patients seen with foreign consultants; and 52 with specialists. Each trainee also worked two days per month in the surgical, ophthalmology, and ENT rooms of the city polyclinic.

The practical activities of the trainee trainers were analyzed for five months from November 1997 to February 1998. The trainee trainers examined all enrolled families regardless of sex, age and type of complaint. Analysis of the frequency of referrals showed that children made the bulk of visits (39.8%): 46 percent had a disease; 23 percent came for preventive examinations; and 31 percent for immunization. More than 25 percent of cases covered by the family doctors were pregnant and gynecological patients. Therapeutic patients accounted for 23.4 percent. It was shown that the most frequent home visits were made in response to specific calls (41.5%), to newborns with pre-morbid status, and to patients being treated at home.

D. Comparative Analysis

A comparative analysis was made to check the efficiency of the transition to the family medicine principle by comparing the practical activities of trainees from the model FGP with those of FGPs 5 and 6 in Karakol, where the old work system existed (ie micro-polyclinics). This was done over a five-month period from November 1997 to March 1998. These FGPs were chosen because of similar population, location and other characteristics. Performance indicators based on clinical-information forms were then analyzed.

Table 4: Comparative data for consultations in the model FGP and FGPs 5 & 6, November 1997 - March 1998

FGP indicators	Consultation of therapeutic patients by pediatricians %	Consultation of pediatric patients by therapists %	Consultation of gynecological patients and pregnant women by therapists %	Consultation of pediatric patients and healthy children by gynecologists %
Group A (model FGP)	34.5	41.4	11.4 / 8.9	21.6
Group B (FGPs 5,6)	11.5	3.5	0	0

It emerged from the data that physicians in Group A (the model FGP) provided the population with health services independent of sex, age or type of complaint. Within group A: therapists and ob-gyn's saw 41.4 percent and 21.6 percent of pediatric patients respectively; while pediatricians saw 34.5 percent of adults. Within group B, however, the pediatricians and therapists did not see gynecological patients and the ob-gyn worked only with patients of her profile (women of fertile age). Analysis of other indicators showed that in comparison with Group B, Group A referred its patients to specialists less often. The cost of health services in the FMTC's model FGP cost half as much as in FGPs 5 and 6 (som 15,998.7 and 36,620.7 relatively).

By the end of February 1998, the trainee trainers had completed the National Family Practitioner Training Program. Besides clinical training, the doctors in the FMTC had received four months practical experience as family doctors and had acquired related skills in family medicine training. In March 1998, all eight trainees sat for the state examinations and received certificates as family medicine specialists.

V. Re-training FGP Physicians in Family Medicine

A. Organizational Issues

The completion of the training of the eight family practice trainers enabled the initiation of the next stage of family medicine training: the re-training of all FGP doctors within Issyk-Kul Oblast. The Ministry of Health issued Prikaz (government order) 94 on April 3, 1998, regarding the launch of the FGP doctors' clinical training in family medicine at the Karakol FMTC.

Table 5: Number of FGP physicians in Issyk-Kul Oblast prior to family medicine training program, by specialty

Site	Obstetrician-gynecologists	Therapists	Pediatricians	Total
Karakol City	5	13	7	25
Balykchi City	5	13	23	41
Zhety-Oguz Rayon	7	11	13	31
Ak-Sui Rayon	4	9	10	23
Tyup Rayon	5	9	17	31
Issyk-Kul Rayon	8	16	16	40
Ton Rayon	6	8	10	24
Total	40	79	96	215

The above table shows that the main group of specialists working in the oblast FGPs was pediatricians (44.4%). The lack of ob-gyns (17.4%) was noted as was the fact that they tended to work in the cities and rayon centers. This fact only increases the need for re-training of pediatricians and therapists in family medicine, which will include capability in obstetrics-gynecology. Six internal FGP experts were also trained.

Training and re-training of doctors was conducted in compliance with the national program of re-training. Vertical programs on family planning, breast-feeding, DOTS, ARI and CD were coordinated with the clinical training on family medicine. These courses were the first specialization for primary health care doctors in family medicine (Prikaz 71, 1999). The study program was divided into six stages. Each stage consisted of four parts. Within each part the trainees were divided into three subgroups, with 12-15 people to each practical class. Each stage began with a one-week course of lectures for all participants and the next two weeks were then devoted to practical study.

The medical headquarters of the FMTC in the model FGP had room for only one subgroup. Another three FGPs were therefore added to the model FGP as training bases and the eight trainers were assigned to these three bases.

The main group of trainers was formed from three specialists, as in an FGP. The remaining five trainers helped to execute practical classes. The medical director coordinated and organized the study program, provided methodological assistance to trainers and oblast specialists on how to conduct classes, made up tests in collaboration with the lecturers, and drew up the program and schedule of each stage. He also organized outreach courses and offered methodological and practical assistance to the oblast FGPs during transition to family medicine.

From the start of the second stage, the practical classes were conducted in two FGP training bases. Thirty percent of the training program also took place in the clinical bases of the oblast hospitals and dispensaries. This was governed by the fact that the family medicine trainers had limited clinical and academic experience and insufficient theoretical scope. None of them had post-graduate education in clinical training. Only one of the three trainers had experience of training from medical college and had a higher doctor's qualification. In addition, one of the required conditions of clinical training is examination and clinical analysis of subject patients (with meningitis, surgical pathology etc.). It was not possible to fulfill this training program based only on the Karakol FMTC; so support of the leading oblast specialists was enlisted.

Table 6: Makeup of clinical training for FGP doctors in Issyk-Kul Oblast, April 1998 - May 2000.

Stages	Number of trainees	Lectures, hours	Seminars, practical classes, hours	Practice hours	Testing hours
1	207	42	36	36	8
2	207	42	36	36	8
3	214	40	36	36	8
4	197	40	36	36	8
5	210	16	60	36	8
6	N/A*	40	36	36	8
	Total	220	240	216	48
	%	30.4%	33.2%	29.8%	6.6%

*stage not completed at the time of this report

The national program to re-train FGP doctors in Issyk-Kul Oblast covers topics on 23 specialties. It proved very difficult to include all these themes in the short-term courses. As a result, while selecting topics for the study program, the focus was on the most widespread diseases; the current level of knowledge among physicians; the epidemiological situation; trainers' suggestions and analytical data about the practical activities of the FMTC. In addition some physicians took two-week courses on family medicine, vertical programs (ARI, CDD, family planning), and 1-2 day seminars on urgent medical issues prior to starting, so some of these topics could be excluded from the program or limited within it.

At the beginning of the first two stages all the doctors were tested. It became clear, however, that none of the physicians had satisfactory knowledge and only a few of them got positive marks. It was decided not to test trainees in future and to design the study programs in spite of previous study courses. Thus the

integration of vertical programs into the national program for re-training FGP doctors in family medicine was carried out.

Trainees studied the less urgent topics by themselves. The most important parts of practical medicine such as immuno-prophylaxis, observation of healthy children, family planning, pre-natal observation, arterial hypertension, diseases of the thyroid gland, diphtheria, hepatitis, brucellosis, ARI of children and others were included within each stage as independent topics, thereby providing continuation, and repetition and strengthening of knowledge.

B. Lectures

The total volume of lectures was 220 hours, which made up 30 percent of the study program. Each stage included topics on five or six disciplines with two to three leading ones. The leading themes of the first stage were general issues on family medicine, pediatrics and clinical pharmacology; the themes of the second stage included endocrinology, cardiology and children's neurology; the third stage included obstetrics-gynecology, medical genetics, neurology and phthysiology (TB); the fourth stage included trauma and orthopedics, teenage psychology and narcology; the fifth stage included preventive medicine, urology and ENT; the sixth stage included hematology and children's and teenagers' gynecology.

Twenty-eight specialists were enlisted to give lectures on family medicine. The medical director from the Karakol FMTC acquainted each lecturer with the program's methodology and the aims and goals of the ZdravReform Program, focusing on regional features and the level of trainees' knowledge. He also provided trainees with medical literature from the Karakol FMTC library.

The most important aspect of the lecturing process was the preparation of questions for testing trainees at the end of clinical training. About 40 percent of final tests were based on the materials in the lectures. It turned out that such final testing was one of the main incentives for trainees to be more attentive and active in lectures.

The medical director attended all the lectures in order to grasp how well the material had been understood and how well the skills had been picked up, as well as identifying the usefulness of topics. Afterwards discussion and analysis of lectures took place, which helped the program coordinators to make amendments. These activities were carried out with specialists who tended to have little to do with the primary health care sector, such as teenage psychologists, specialists in narcology, orthopedists, and medical geneticists. Some topics were difficult to comprehend and it was therefore necessary to repeat them during practical classes and seminars. These included diseases of the thyroid gland, diabetes, coronary deficiency, ischemic disease, orthopedics, children's neurology, and bronchial asthma.

C. Practical Training

The practical section made up 70 percent of the training program. About 30 percent of this work took place in oblast hospitals and dispensaries, and over 40 percent in the model FGP. During the re-training of FGP physicians, the FMTC trainers used traditional methods and study techniques, which can be divided as follows:

1. Seminars / practical classes with patient examination and subsequent clinical analysis;
2. Joint patient consultation by trainees and trainers in the office and at home, with specialists;
3. Mastering treatment and equipment.

Practical classes were conducted in subgroups of 10-15 trainees of mixed specialties, age and experience. Groups of three to four trainee doctors would see patients with the trainers. An interactive approach was used in the process of training small groups. Mutual learning is seen as one of the main advantages in mastering how to become a family doctor within a relatively short period of time. As a result, the more traditional method of learning, in which the trainer has the dominating role, was avoided. The interactive

method turned out to be the most appropriate for successful fulfillment of the practical part of the program.

Completing the practical element of the training program took 456 study hours. The six stages covered 108 topics, over 60 percent of which were based on the three main specialties (ob-gyn, pediatrics, therapy). A module based on the WHO program on Healthy Lifestyles – ‘Helping People to Change’ was prepared, to reflect the preventive orientation of the primary health care sector. The successful completion of the first three stages of the program created a favorable base for a transition in stages 4-5 to focusing more on problems. This approach addresses the realities of general practice, such as the large amount of patients examined and the limited capacity. Considering this, the physician has to be able to use brief and clear differential-diagnostic schemes in order to help avoid mistakes. The doctors were advised to use the general scheme of differential diagnostics proposed by John Murtaugh in his book *General Practice*.

The three family medicine trainers and the medical director conducted about 70 percent of the practical classes and seminars. They also coordinated the practical training for the trainees and provided methodological and practical assistance to co-trainers and doctors in the model FGP in the transition to the family medicine (‘one family – one doctor’).

The other 30 percent of the practical classes and seminars were conducted by specialists from children’s/adult hospitals, dermato-venereology and TB dispensaries, and the city polyclinic. One study day covered two themes. The training process started with a seminar followed by examination and clinical analysis of patients. One of the trainers and/or the medical director, together with the doctors being trained, took part in the classes given by oblast specialists in order to study the themes, experience and methods of teaching. While assessing the quality of training, the opinions of trainees were taken into account. Fifteen specialists from oblast facilities were enlisted for practical classes.

Five family medicine co-trainers, five doctors from the model FGP and between two and seven city polyclinic specialists carried out joint consultations and taught the trainees how to master medical equipment. The number of family doctors and polyclinic specialists enlisted depended on the theme of the study program and the number of trainees.

A list of reading materials given to physicians during training can be found in Appendix 1.

VI. Experience of Implementing Family Medicine

By September 1998, i.e. after the first stage of clinical training, doctors from only two FGPs in Karakol had started to use the family medicine principle. In the remaining 72 FGPs in the oblast, despite having been trained as family doctors, and despite having existed as FGPs for over two years, the physicians continued to work according to their specialty. Exchanges between the three FGP specialists rarely took place in spite of the fact that team discussion of patients in cases of difficult diagnosis and treatment is the most efficient method for promoting mutual understanding.

Statistics show that in the last three years in Balykchi City and Ton Rayon, resident pediatricians only saw children. Monitoring of pregnant patients was merely a formal procedure. According to the prikaz on preventive measures against complications of pregnancy, doctors and nurses are liable to look after pregnant women within a certain district regardless of their specialty. In these districts, however, observation was only visual and curative-preventive measures for basic complaints were not handed out. Frequent pregnancy complications and cases of maternal mortality were evidence of the resulting inefficiency.

Conversely, review of the work of one ob-gyn doctor showed that she *only* provided health care to pregnant and gynecological patients. However, a questionnaire conducted among 180 trainees in the oblast between April and July 1997 showed that although FGP doctors worked with their specialty they also wanted to work as family physicians.

The following are obstacles that make transition to family medicine difficult:

- Within each FGP physicians work different shifts. Transition to a single work schedule would enable physicians to share their knowledge and to form a team within the FGP;
- Clinic heads and physicians are unused to responsibility, and lack experience in implementing innovations;
- There is a lack of material interest in implementing family medicine, i.e. neither budget, nor Mandatory Health Insurance Fund (MHIF) stipulated bonuses for transition to the family principle;
- The salary of FGP physicians is low and erratic. Ob-gyn's do not get salaries for home visits.
- The former system of quality control is being maintained by the Oblast Health Department, the Ministry of Health and MHIF. Each specialist (therapist/pediatrician/ob-gyn) is required to produce a certain output and quality of work, and to make reports on his/her specialty. This is likely to be the main reason hindering transition to family medicine within FGPs.

It was noted that the clinical training program for FGP doctors at the Karakol FMTC base was not being coordinated with management or practical training at the FGP. In order to integrate family medicine into the existing health care system, it is necessary for the FMTC to organize outreach training in the oblast's FGPs to provide the practices with organizational, methodological and practical assistance.

The head specialists from the OHD and the MOH and certain physicians objected to the transition of all oblast doctors to family medicine until the completion of clinical training. To counter this, proponents argued that the principle of parallel training with a focus on practice, as carried out in the model FGP, should be maintained at the oblast level too. Reorganization of the FGPs' activities based on the principle 'one family - one doctor' is a transitional step in building the new system of primary health care. In this parallel system, each doctor will maintain responsibility for his or her allotted families while also reporting on his/her specialty. In addition the FMTC will provide support on the ground.

As a result of all of these observations there was an expansion in the work volume and objectives of the FMTC. To allow for this, the following measures were undertaken:

- A work plan for the Karakol FMTC was developed;
- The timetable for implementation of the National Family Physicians Training Program for re-training Issyk-Kul FGP physicians was changed. It was proposed that employees from the FMTC would be sent to oblast rayons and cities after the training courses provided at the FMTC site. During these trips, the FMTC employees would provide ongoing assistance to FGP physicians in the transition to family medicine. These would be seen as 'outreach training courses'.
- These FMTC activities should be considered as outreach training courses (or clinical practice for trainees) and, as a result, they should be seen as a continuation of the three-week clinical courses.

A. FMTC Outreach Training Courses for FGPs in Issyk-Kul Oblast.

The goal of these training courses was to coordinate clinical training with practical work in Issyk-Kul Oblast. The objectives were:

- 1) To encourage each oblast FGP to focus on the actual problems of practicing family medicine on-site;
- 2) To follow up clinical training on family medicine with practical application of knowledge, expansion of range of services, etc. Particular attention should be paid to the quality of implementation of vertical programs, such as family planning, ARI, children diseases, DOTS therapy;

- 3) To check the application of the FMTC guidelines and instructions handed out to FGP physicians during training;
- 4) To assess health care services received by the enrolled population and to determine whether or not FGPs are following the principles of family medicine when providing services to the population;
- 5) To evaluate if any problems arise when FGPs transfer to family medicine and to provide physicians and nurses with practical and methodological assistance;
- 6) To provide assistance to FGPs in the process of reorganization based on the principle ‘one family – one doctor’;
- 7) To ensure that the FMTC cooperates closely with the Oblast Health Department, and chief physicians in the rayons, cities and oblasts.

The Karakol FMTC director coordinated activities with OHD heads in a working group meeting. In addition, the meeting was attended by: doctors from cities and oblast rayons; and deputy heads and chief specialists from oblast, rayon and city health departments. The fact that training and practical work were not coordinated on site was emphasized. The chief physicians of oblast rayons supported the FMTC plans and agreed to work jointly to solve the FGPs’ problems. The head of the Oblast Health Department issued orders (45, 60) on the transitional phases of Issyk-Kul Oblast FGP physicians to family medicine.

FMTC employees made eight visits to Issyk-Kul Oblast FGPs during the period September to December 1999. FMTC employees spent 60 working days in FGPs in total. They worked in 72 FGPs, 17 FAPs (feldsher/midwife ambulatory posts) and eight SUBs (small rural hospitals). In the process they reviewed the following activities at each site: administrative, organizational, personnel management, quality of health services, relations with other health facilities, etc. Many problems were solved on-site which helped to optimize the transition to family medicine. Recommendations on the solution of issues that FMTC employees were not authorized to solve were given to rayon and oblast health authorities.

B. Evaluation of FGP Status Prior to Training Courses (Sept - May 1999):

- 1) Prior to the Karakol FMTC’s activities, it was shown that 59 oblast FGPs (each with two or more physicians), functioned in a way similar to micro-polyclinics where every physician worked according to his/her specialty. In 15 rural FGPs (each with one physician, usually a pediatrician) services for pregnant women were unusual, and the doctors preferred to refer these women and other adults to a rayon health facility for consultation.
- 2) It was noticed that ob-gyn’s did not want to make the transition to family medicine. They did not want other specialists to see pregnant women.
- 3) The FMTC’s practical guidelines on prenatal examination and provision of services to children were only used by the relevant specialists. Consultations by polyclinic specialists (ob-gyn’s) and examinations provided by nurses to pregnant women were not informative enough (Ton and Tyup Rayons). Application of modern treatment and diagnosis methods were not understood, and failure to follow them upset the polyclinic and hospital specialists (Karakol and Balykchi Cities).
- 4) In Ton and Zhety Oguz Rayons, and Karakol and Balykchi Cities, FGP physicians provided consultations on family planning issues. In the FGPs of Issyk-Kul and Tyup Rayons, a polyclinic specialist kept the contraceptives, so FGP physicians were unable to consult on family planning. Tyup Rayon center had a high birth rate and suffered from lack of contraceptives.
- 5) Except for Zhety Oguz Rayon, no other rural FGPs or newly opened urban FGPs had any laboratory capacity. In many places, the salaries of laboratory workers had been eradicated and/or the laboratories lacked materials.

- 6) Almost everywhere, FGP physicians were dissatisfied with the work of their managers.
- 7) The FGPs had created libraries with books provided by ZdravReform. There were books on pediatrics and a number of volumes on internal diseases. Many physicians found the latter difficult to understand. None of the oblast FGPs had books on family medicine.
- 8) In FGPs located in rayon centers and cities, FGP physicians worked in shifts. Several FGPs did not have pre-physician examination rooms. In a number of FGPs, two physicians worked in one room at the same time.
- 9) All rural FGPs in the Aksui Rayon of Issyk-Kul Oblast either had no heating system or suffered from frequent heating shortages.
- 10) Oblast FGPs suffered from a lack of ob-gyn's and therapists. The FGPs in Balykchi City and Aksui Rayon had vacant positions.
- 11) FAPs provided services to about 30 percent of the oblast population. Consequently this population was not covered by family physicians although FGPs were responsible for certain FAPs. Physicians came only once or twice a year because of lack of fuel and transport. Physicians and nurses were often invited to the rayon centers (Issyk-Kul and Aksui Rayons) without per diems.
- 12) FGPs had a certain amount of gynecological equipment. Medical equipment and inventories transferred from polyclinics and hospitals was not properly registered. In general, the Karakol City FGPs were independent. In the rayons and in Balykchi and Cholpon Ata Cities the Central Rayon Hospital's chief physicians, and the deputy heads of the polyclinics, controlled the performance of the FGPs.
- 13) Almost all rural health facilities did not have refrigerators due to electricity cuts. This made the use of vaccines difficult.
- 14) Relations between FGPs and catchment hospitals in all oblast rayons – Georgievka Village of Issyk-Kul Oblast, Tasma Village of Tyup Rayon, Barskoon of Zhety Oguz Rayon, Kara Talaa of Ton Rayon, Boz Uchuk, Karakol of Ak-Sui Rayon – were complex. After the reorganization of catchment hospitals and the creation of FGPs, the hospitals retained nurses, feldshers, other staff and chief physicians. However, due to reductions, the hospitals did not keep practicing physicians. FGP physicians provided services to hospital patients almost free of charge. Some hospitals retained drivers in their staff schedules even if they did not have cars. (Ak-Suisi Rayon). They also retained other staff in spite of the reduction of the population size and range of services provided (Pristan Village).
- 15) In contrast, the catchment hospitals in Kuturgu, Taldy Suu and Santash in Tyupski Rayon and Tamchi Village in Issyk-Kul Rayon did not have any contradictions and their activities were coordinated. The heads of these hospitals were clinical, rather than non-practicing chief, physicians. In these villages, it is necessary to retain hospital beds, and if possible to expand bed funds, taking into account that these villages are located in remote areas. In this case, it would be useful to reconsider the MOH order, (January 2000) which will eliminate all catchment hospitals. Local conditions should be taken into account when making such decisions. Physicians are concerned about the material resources of these hospitals since rationalization of such health facilities means that material resources partly disappeared.
- 16) The FGPs in Aksui Rayon are in distress. They had continued the administrative style of management carried out by a chief physician. All decisions in these FGPs were made by the chief physician (a non-practicing doctor). Many clinical physicians had no transport since, on the order of the chief physician, all cars had been concentrated at the central rayon hospital. The chief physician made other physicians take vacations without payment (FGP of Boz Uchuk Village) or made them work in the hospital (Karakol Village) for free while at the same time paying salaries to drivers who did not work. Due to the absence of transportation, FGP physicians visited those registered on their list once or

twice a year. Very often, they traveled to villages by cart or on foot. Almost all rayon FGP had no electricity or heating; some FGP functioned without any physicians for over six months.

- 17) Issyk-Kul Rayon FGP physicians worked shifts in the hospital without payment.

C. Measures and Recommendations taken to rectify these Problems

- 1) The FGPs of Ton, Issyk-Kul and Zhety-Oguz Rayons and Balykchi and Karakol Cities reorganized their facilities based on the 'one family - one doctor' principle. They reorganized registration offices, opened pre-physician examination rooms, divided the enrolled population between FGP physicians, and transferred medical documentation. In places where there were 2-3 functioning FGPs, it was suggested that they organize their work in shifts. In Aksui Rayon, the introduction of family medicine was not possible due to lack of physicians and the difficulty of transportation between villages. Only FGPs 1-2, in Aksu Village, worked based on the family medicine principle.
- 2) In rural areas of the oblast, the villages are divided between FGP physicians. In some villages, it was recommended that physicians work in FAPs in order to bring provision of health care closer to the population. It is necessary to emphasize that the population size of these villages exceeds two thousand people. (Bayet, Kashat of Issyk-Kul Rayon, Ak-Sui of Tonski Rayon).
- 3) An example of implementation of the recommendations made by Karakol FMTC on optimization of activities by FGP 14 (Issyk-Kul Rayon): FGP 14 provides services to three villages, and two of the villages have physicians. However, the physicians did not cooperate with each other. The FMTC, together with FGP physicians, developed a single schedule for physicians of FGP 14 regardless of their place of work. This helped teambuilding and facilitated the performance of individual physicians.
- 4) Based on recommendations, the clinical managers of certain FGPs were replaced.
- 5) All FGP physicians and FAP obstetricians were given a set of methodological recommendations on the 'Job description of a family physician on therapy, pediatrics, obstetrics and gynecology'. It was recommended that all oblast FGPs use these methodological recommendations when implementing prenatal examinations.
- 6) In all the FGPs and FAPs, pregnant women with pregnancy complications and patients with serious illnesses were consulted. During these visits over 90 patients were examined, including five referred to hospital. The quality of monitoring of patients was assessed. In cases of error, patients were consulted and physicians trained on correct diagnosis and treatment. In addition to the determination of defects, recommendations were given on their elimination. Training was implemented for physicians to make them gain various skills: heart auscultation, examination of patients with various illnesses, reading ECGs, interpretation of lab tests, correct evaluation of discharge certificates issued by the city hospitals, etc. Most attention was paid to practical skills in examining pregnant women, gynecological examination of patients, evaluation and taking smears for gonorrhea, cytology, etc.
- 7) While working with physicians, the FMTC trainers tried to help them with examination of other types of patients. For example children and therapeutic patients were examined by ob-gyn's and so on.
- 8) In FAPs, together with ob-gyns, the FMTC trainers examined almost all pregnant women within the village, and inserted and removed inter-uterine devices (IUDs). Over 500 IUDs were distributed to FGPs and FAPs.
- 9) Fifteen practical training courses for nurses and feldshers were implemented. They included courses on treatment of hypertension, differentiated diagnostics of a painful chest syndrome, prevention of sexually transmitted diseases, use of the contraceptive, examination of healthy children, and immunization. An evaluation of nurses' and feldshers' knowledge on ARI and child diseases, DOTS therapy and family planning was also implemented. When unsatisfactory levels of knowledge were highlighted, training courses and instruction were given.

The reports were submitted to the head of the OHD, and the president of Issyk-Kul Oblast FGP Association.

D. Monitoring of Issyk-Kul Oblast FGPA Activities

In December 1999, the Karakol FMTC implemented a second evaluation (monitoring) of FGPs of Ton Rayon and Balykchi City. Reorganization activities, and evaluation of quality through the comparative analysis of physicians' reports for 1997, 1998 and 1999 were reviewed.

All FGPs of Ton Rayon and Balykchi City have two or more physicians who provide services to the population regardless of age, sex and type of complaint. Those FGPs with only one physician expanded their range of services through provision of health care to other types of patients.

The conclusions from this evaluation found that FGPs have created a system of cross training and have improved the quality of medical documentation. Diagnoses are formulated according to international requirements and adequate treatment is determined in a timely fashion. According to the reports, the quality of health services provided to the population is improving. The number of patient referrals to specialists and hospitals has decreased, and no cases of death have been registered. All physicians now work on family planning, widely distribute contraceptives, and start monitoring pregnant women in the early phases of pregnancy. The use of various types of contraceptives depends on their provision through humanitarian aid. As the table below shows, birth spacing has increased over the last three years but the birth rate remains high. It is likely that the increase of birth spacing is related to the use of contraceptives and family planning methods. The use of IUDs is the main method of contraception. Oral contraceptives take second place and other types of contraceptive are less popular. Recently, surgical sterilization has also been used (66 cases). The level of abortions has decreased and in the last couple of years mortality caused by abortion has not been registered.

Table 7: Comparative indicators of birth regulation in Issyk-Kul Oblast for 1996 –1998

Indicators	1996	1997	1998
Total number of women of fertile age	83,030	91,045	92,106
Coverage of women of fertile age with contraception:	42.6%	29.0%	34.4%
Of that, those using			
a) IUDs	63.0%	70.1%	69.2%
b) Contraceptives containing hormones and others	37.0%	29.9%	30.5%
Abortions per 1000 women of fertile age	20.8	18.2	15.4
Number of births per year	8924	8426	8246
Birth spacing**:			
a) number of women who give birth every second year	17.1	14.2	11.2
b) Number of women who give birth every third year	23.2	16.5	23.0
Women with multiple births**	13.2	30.3	27.9
Women with first birth**	30.8	30.3	27.9
Birth indicators***	21.4	19.5	19.1

Comments:

* per 1000 women of fertile age

** per total births a year in %

*** per average number of population

The quality of pre natal monitoring has improved significantly. Physicians now work based on the methodological recommendations developed by the FMTC. The ob-gyns' consultations are informative and useful for FGP family physicians. Pediatricians from the rayon FGPs often see adults.

The FGPs in Balykchi City have worked with the family medicine principle since the autumn of 1998. Physicians see every family member when undertaking home visits. Traditionally the main indicator of a primary care physicians' work was the number of services provided to the population in an FGP. The reduction of referrals to hospitals, in particular children's referrals, early monitoring of pregnant women

and many other things, have become possible because of the stronger emphasis on preventive measures. Taking into account that the city does not have enough therapists, the focus of FGP physicians on preventive medicine will probably solve this problem.

E. Training Quality Evaluation

The final tests were implemented at the end of each training course. Tests consisted of 100 questions developed by lecturers and the medical director. On average, about 90 percent of participants received positive marks. The test results were also used to optimize the training courses of the subsequent stages. In line with the orders of the MOH of February 3, 2000 and February 7-8, 2000, training participants sat state examinations after attending five family medicine training stages. Those that passed were issued with MOH family physician certificates. Six training stages were equated to an advanced training in family medicine. On completion of the final stage, all FGP physicians received certificates from the RCCTP&PS.

VII. Conclusion

Training personnel is the most important prerequisite for achieving the strategic objectives of primary health care reform in Kyrgyzstan. In the Issyk-Kul Oblast the problem was approached by establishing a family medicine training center in Karakol, which was used as a model FGP in which to train doctors in family medicine. The center's first objective was to train trainers. These eight specialist trainers then went on to train the 215 family group practice physicians of Issyk-Kul Oblast. The FMTC also implemented clinical courses at the primary care level. Simultaneous theoretical and practical training met the requirements of practical medicine and was based on new scientific models used by leading world universities.

The most important element in training trainers and FGP physicians in family medicine is their development as practicing family physicians. Based on the model FGP, a mechanism of implementation of family medicine into the existing oblast health care system was implemented. This was achieved through the reorganization of FGP activities and division of the enrolled population between physicians based on the principle 'one family - one doctor'. This increased doctors' personal responsibility for the health of certain families and helped to create incentives for physicians that facilitated the improvement of physicians' qualifications through active use of clinical course materials, cross training and self-improvement.

The FGP physicians provide services to patients regardless of their age, sex and type of complaint. This has led to an increase in quality and a decrease in costs. The data confirms the suitability of the strategic directions taken in the primary health care reform program, which are based on the implementation of family medicine under the ZdravReform Program. The following factors facilitated the successful transition to family medicine: family medicine clinical training; team work, cross training and mutual assistance; personal responsibility of physicians for certain families; professionalism of physicians when examining other types of patients (another specialty); financial support from USAID ZdravReform.

The FMTC implemented mechanisms for new treatment and preventive methods, adapting international experience to local conditions, and implementing analysis of FGP performance, which allowed practical recommendations to be developed.

This program was coordinated with WHO/BASICS/UNICEF training programs on ARI and CDD, DOTS, and family planning (JHPIEGO). Three-week short-term courses were implemented. Over two years, six family medicine training cycles were implemented. The first week of each stage consisted of lectures and the subsequent two weeks consisted of practical training. Eight family medicine trainers and leading oblast specialists provided the training courses. When training doctors: the experience, training methods, and methodological recommendations developed during the training of trainers were used. At the end of each training course, the participants took tests to evaluate their knowledge.

In order to coordinate clinical training and practical work on site, the Karakol FMTC provided FGP physicians with organizational, methodological and practical assistance in a series of outreach training courses. The implementation of family medicine across the oblast was achieved through the reorganization of FGPs activities, based on the principle 'one family – one doctor'. On site, individual work with each physician was implemented, i.e. consultation of patients and joint examination regardless of age, sex and type of complaint. Practical training courses on actual problems of practical medicine were also implemented, and the level of knowledge of local physicians was evaluated. During the implementation of activities on site, non-medical problems such as administrative, financial and economic issues were also attended to, which helped further the outreach training goal of achieving the transition to family medicine. Awareness of the actual situation on the ground and continuous contact between FMTC employees and oblast FGP physicians helped to optimize the training process.

It appears that the main problem related to the implementation of family medicine is inadequate incentives provided to physicians to make the change. The budget and MHIF do not yet provide any monetary incentives to physicians if they transfer to the family medicine principle and salaries for physicians remain very low. Another problem is lack of effective medical literature, which is necessary so that doctors can continue the learning process when the training courses are finished. Books procured by ZdravReform on separate specialty topics do not meet the requirements of practical medicine on site.

Appendix 1

Medical literature and other materials given to trainees during training:

- 1) Job descriptions for family physicians covering therapy, pediatrics and obstetrics-gynecology.
- 2) Percentile tables for assessment of physical and neuro-psychological development of children.
- 3) Diedd's tables for EKG decoding.
- 4) Pregnancy monitoring program: assessment of risks, factors and potential illness during pregnancy.
- 5) Drug formulary for family doctors, Karakol City.
- 6) Pocket reference book on rational use of medicines.
- 7) 'Arterial hypertension', chapter from *Family Medicine*, ed. R Taylor.
- 8) Rouz questionnaire for diagnosis of IDH and stenocardia.
- 9) Classification of diabetes. Calculation of bread units for diabetics.
- 10) Criteria for diagnosis of rheumatism.
- 11) Criteria for diagnosis and treatment of rheumatoid arthritis.
- 12) Clinical examination of hepatitis virus.
- 13) 'Brucellosis', chapter from *Infectious diseases*.
- 14) Lecture on gout from the *New Medical Journal*, 1995.
- 15) Hypertensive disease. Present-day data on classification and treatment tactics.
- 16) Treatment of bronchial asthma.
- 17) *Eki zbuurok bir suuu*, A. Askarov. Book on prophylaxis of STIs (in Kyrgyz).
- 18) *Time to be healthy*, ZdravReform/USAID Newsletter, September/October, 1999.
- 19) Healthcare of Kyrgyzstan Journal, 2, 1999.
- 20) 960 tests on family medicine.

Appendix 2

Popularization of family medicine in the media

Place	Coordination	Topic
‘Almaz’ radio station, Karakol city, February, 1997	ZdravReform marketing team	Karakol FMTC
«Round Table» Issyk-Kul Oblast TV. June, 1998	Venereal dispensary and marketing team	Family planning, sexual education and prevention of STIs
Report on Republican TV, January, 1999	ZdravReform marketing team	Karakol FMTC and family doctors from the model FGP
Article ‘Further stages of reform’ in oblast newspaper «Genofond», March, 1998	Director of Karakol FMTC	Retraining of oblast FGP physicians in family medicine